

REMARKS

The Official Action dated November 6, 2002 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

By the present Amendment, the specification and claim 5 have been amended to correct a formula of the bleach activator in accordance with the teachings of the specification at pages 8 and 9. Claims 2, 4-7, 11, 17, 22 and 23 have been amended for matters of form, and claims 20 and 21 have been amended to correct their dependency. A Version With Markings Showing Changes Made is attached. It is believed that these changes do not involve any introduction of new matter, whereby entry is believed to be in order and is respectfully requested.

In the Official Action, claims 5 and 21 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner noted that claim 5 defined L as a leaving group at lines 3-5 but did not include a L in the first formula. The Examiner asserted that claim 21 lacked insufficient antecedent basis for recitation of the curing step.

This rejection is traversed and reconsideration is respectfully requested. More particularly, claim 5 has been amended to correct a typographical error in the bleach activator (a) and the corrected formula recites L as a leaving group. The dependency of claim 21 has been changed to claim 4 which provides sufficient antecedent basis for recitation of the curing step. It is therefore submitted that claims 5 and 21 are definite in accordance with the requirements of 35 U.S.C. §112, second paragraph, whereby the rejection has been overcome. Reconsideration is respectfully requested.

Claim 17 was objected to based on a typographical error. This error has been corrected.

Claims 1 and 4-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Willey et al published PCT application WO 94/28106 in view of the Payet U.S. Patent No. 5,885,303. The Examiner asserted that Willey et al teach laundry detergent compositions containing bleaching systems with bleach activators, an example of which comprises 15% sodium percarbonate and 5% nonanoyl caprolactam with benzoxazin activator. The Examiner asserted that Payet teaches a process for imparting durable press to fabrics using formaldehyde, a catalyst and a silicone elastomer. The Examiner concluded that it would have been obvious to both bleach and provide durable press to a fabric using the bleaching and durable press systems of the cited references.

However, Applicants submit that the methods and products defined by claims 1 and 4-25 are nonobvious over and patentably distinguishable from the combination of Willey et al and Payet. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

More particularly, as defined by claim 1, the invention is directed to methods for treatment of a non-finished textile component. The methods comprise the steps of providing a non-finished textile component, saturating the textile component with an aqueous hydrophobic bleaching solution, and allowing the bleaching solution to remain in contact with the textile component for a period of time sufficient to bleach the textile component. The aqueous hydrophobic bleaching solution comprises hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid. The method further comprises following the bleaching step by finishing the textile component to provide durable press to the textile component.

As set forth in the specification, for example at page 17, beginning at line 29, a non-finished textile component is a material that has not been dyed, printed or otherwise provided a finishing step such as durable press coatings. As further set forth in the specification, one

of ordinary skill in the art will recognize therefore that the non-treated textile component recited in claim 1 has not been passed through a garment or other manufacturing process involving cutting and sewing of fabric material. While conventional bleaching and durable press treatments can provide textile components with significantly reduced strength, the present method employs an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid in order to obtain sufficient bleaching without the conventionally-incurred strength reduction. Thus, the bleaching step, designed to destroy naturally occurring color bodies, can be followed by a durable press finish to provide a bleached, durable press fabric having better strength properties. In the method of claim 4, the durable press step is provided by treating the textile with an aqueous solution of formaldehyde, a crosslinking catalyst and an effective amount of a silicone elastomer forming material to further minimize strength reduction in the fabric product.

In contrast to the presently claimed methods and products thereof which employ a non-finished textile component for bleaching, Willey et al relate to bleaching and/or laundering of finished textile components rather than non-finished textile components. For example, Willey et al disclose detergent compositions for surface cleaning of fabrics to remove stains and/or soils from the fabrics and bleaching systems for removing most types of soils from fabrics, including protein and lipid soils, dingy soils and heavy soil loads, especially from nucleophilic and body soils (page 7, lines 17-22). Applicants find no teaching or suggestion by Willey et al relating to any method or product employing a non-finished textile component.

The deficiencies of Willey et al are not resolved by Payet. That is, Payet discloses a durable press/wrinkle-free process which comprises treating a cellulosic fiber-containing fabric with formaldehyde, a catalyst capable of catalyzing the crosslinking reaction between

th formaldehyde and cellulose, and silicone elastomer, and heat-curing the treated cellulose-containing fabric. However, Applicants find no teaching or suggestion by Payet relating to a method for treatment of a non-finished textile component comprising, inter alia, saturating a non-finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid. Similarly, Applicants find no teaching or suggestion by Payet that such a method will provide necessary bleaching without the significant strength reduction encountered in prior art bleaching methods. Finally, Applicants find no teaching or suggestion by Payet for combining the durable press process of Payet with a bleaching step employing an aqueous hydrophobic bleaching solution and a hydrophobic bleach activator or hydrophobic peracid as presently claimed.

In order to render a claimed invention obvious, the prior art must enable one skilled in the art to make and use the claimed invention, *Motorola, Inc. v. Interdigital Tech. Corp.*, 43 U.S.P.Q.2d 1481, 1489 (Fed. Cir. 1997). In view of the failure of Willey et al and Payet to teach a method for treatment of a non-finished textile component including, inter alia, saturating a non-finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid, particularly in combination with the remaining steps of claim 1, Willey et al and Payet in combination do not enable one skilled in the art to make and use the claimed invention. Thus, the cited combination of references does not render the present invention obvious. It is therefore submitted that the methods and products defined by claims 1 and 4-25 are nonobvious over and patentably distinguishable from Willey et al in view of Payet, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

Claims 1-3, 5-21 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Willey et al in view of the Wright, III U.S. Patent No. 3,639,096. The Examiner again relied on Willey et al as teaching laundry detergent compositions containing bleaching systems with bleach activators, and the Examiner relied on Wright as teaching a process for imparting wrinkle resistance to fabrics by contacting a fabric with dimethylol-4,5-dihydroxyethylene urea. The Examiner asserted that it would have been obvious to use the bleaching and durable press systems of the cited references in combination.

However, Applicants submit that the methods and products defined by claims 1-3, 5-21 and 24 are nonobvious over and patentably distinguishable from the combination of Willey et al and Wright. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

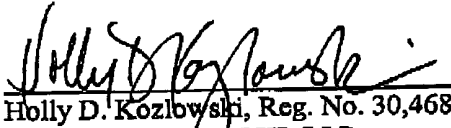
The methods according to the invention as defined by claim 1 are discussed in detail above, as are the advantages of providing a bleached, durable press fabric having reduced strength loss. The deficiencies of Willey et al are also discussed above, namely the failure of Willey et al to teach or suggest a method for the treatment of a non-finished textile component. The deficiencies of Willey are not resolved by Wright. That is, Wright discloses cellulosic textiles dyed with a direct dye and characterized by a wrinkle-resistant finish comprising a cured composition which in the uncured state contained N,N'-dimethylol-4,5-dihydroxyethylene urea and a methylated melamine formaldehyde condensate. The composition is cured with an acid catalyst and heat. However, Applicants find no teaching or suggestion by Wright relating to methods for treatment of a non-finished textile component. To the contrary, the processes of Wright are directed to treatment of dyed fabric (column 3, lines 12-15).

In view of the failure of Willey et al and Wright to teach or suggest a process for treatment of a non-finished textile component, particularly comprising saturating the non-

finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator, the combination of Willey et al and Wright fails to enable one of ordinary skill in the art to make and use the presently claimed methods and products. Thus, the combination of Willey et al and Wright does not render the presently claimed methods and products obvious. It is therefore submitted that the methods and products defined by claims 1-3, 5-21 and 24 are nonobvious over and patentably distinguishable from Willey et al in view of Wright, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the claim objection and the rejections under 35 U.S.C. §§ 103 and 112, second paragraph, and places the present application in condition for allowance. Reconsideration and an early allowance are respectfully requested.

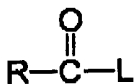
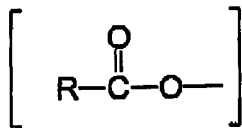
Respectfully submitted,


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VERSION WITH MARKINGS SHOWING CHANGES MADE**In the Specification:**

The paragraph at page 4, lines 3-6 is amended as follows:

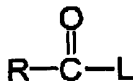
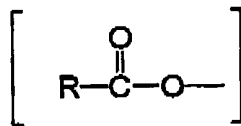
--a) a bleach activator of the general formula:



wherein R is an alkyl group having from about 5 to about 17, preferably from about 8 to about 11, carbon atoms and L is a leaving group;--

The paragraph at page 7, line 26 - page 8, line 6 is amended as follows:

--Particularly useful and preferred is the combination of hydrogen peroxide and hydrophobic bleach activators, and in particular the alkanoyloxy class of bleach activators having the general formula:



wherein R is an alkyl chain having from about 5 to about 17, preferably from about 8 to about 11 carbon atoms and L can be essentially any suitable leaving group. A leaving group is any

group that is displaced from the bleaching activator as a consequence of the nucleophilic attack on the bleach activator by the perhydroxide anion. This, the perhydrolysis reaction, results in the formation of the peroxy-carboxylic acid. Generally, for a group to be a suitable leaving group it must exert an electron attracting effect. It should also form a stable entity so that the rate of the back reaction is negligible. This facilitates the nucleophilic attack by the perhydroxide anion.--

In the Claims:

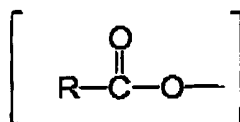
Claims 2, 4-7, 11, 17 and 20-23 are amended as follows:

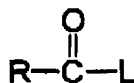
2. (Amended) The method as claimed in Claim 1 wherein said step of providing durable press comprises treating the textile with a urea based crosslinking [agents] agent.

4. The method as claimed in Claim 1 wherein said step of providing durable press comprises treating the textile with an aqueous solution of formaldehyde, a catalyst capable of catalyzing a cross linking reaction with the textile and an effective amount of a silicone elastomer forming material, and curing said treated textile to [form] provide durable press [in] to said textile component.

5. (Amended) The method as claimed in Claim 2 wherein said bleaching solution comprises hydrogen peroxide and a hydrophobic bleach activator selected from the group consisting of:

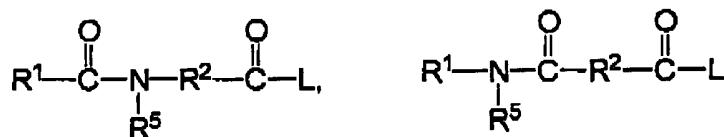
a) a bleach activator of the general formula:





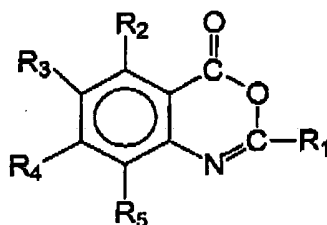
wherein R is an alkyl chain having from about 5 to about 17 carbon atoms and L is a leaving group;

b) a bleach activator of the general formula:



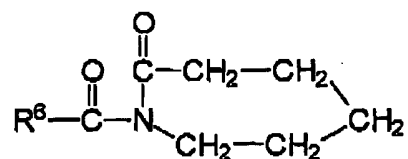
or mixtures thereof, wherein R^1 is an alkyl, aryl, or alkaryl group containing from about 1 to about 14 carbon atoms, R^2 is an alkylene, arylene or alkarylene group containing from about 1 to about 14 carbon atoms, R^5 is H or an alkyl, aryl, or alkaryl group containing from about 1 to about 10 carbon atoms, and L is a leaving group;

c) a benzoxazin-type bleach activator of the formula:



wherein R_1 is H, alkyl, alkaryl, aryl, or arylalkyl, and wherein R_2 , R_3 , R_4 , and R_5 may be the same or different substituents selected from the group consisting of H, halogen, alkyl, alkenyl, aryl, hydroxyl, alkoxyl, amino, alkylamino, $-\text{COOR}_6$, wherein R_6 is H or an alkyl group, and carbonyl [functions];

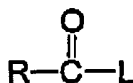
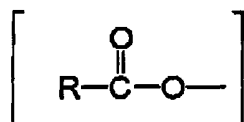
d) a N-acyl caprolactam bleach activator of the formula:



wherein R^6 is H or an alkyl, aryl, alkoxyaryl, or alkaryl group containing from 1 to 12 carbons; and

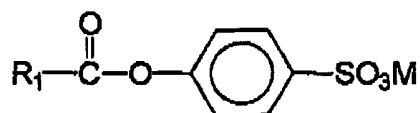
e) mixtures of a, b, c and d.

6. (Amended) The method as claimed in Claim 5 wherein said hydrophobic bleach activator is a bleach activator selected from the general formula:



wherein R is an alkyl chain having from about 7 to about 12 carbon atoms and L is a leaving group, the conjugate acid of which has a pKa from about 4 to about 13.

7. (Amended) The method as claimed in Claim 4 wherein said bleach activator is an [alkanoyloxybenzenesulfonates] alkanoyloxybenzenesulfonate of the formula:



wherein R_1 is an alkyl group having from about 8 to about 11 carbon atoms and M is a suitable cation.

11. (Amended) The method as claimed in Claim 1 wherein said textile component [to] remains in contact with said bleaching solution for from about 15 to about 180 minutes.
17. (Amended) The method as claimed in Claim 14 wherein said textile component experiences a fluidity [increase] increase of less than about 25%.
20. (Amended) The method as claimed in claim [1] 19 further comprising the step of de-sizing and said non-finished textile component prior to contact with said bleaching solution.
21. (Amended) The method as claimed in Claim [1] 4 wherein said curing step is a heat curing and said heat curing is carried out at a temperature of from about 250°F to about 325°F.
22. (Amended) The method as claimed in Claim 4 wherein said textile is immersed in said treatment solution to provide a pick up, on weight of fabric, of at least about 3% formaldehyde, at least about 1% catalyst and at least 1% silicone elastomer forming material.
23. (Amended) The method as claimed in Claim 4 wherein said catalyst [is] comprises magnesium chloride [containing] and citric acid.

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